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 NEWS 3
                  (ROSPATENT) added to list of core patent offices covered
                 PATDPAFULL - New display fields provide for legal status
 NEWS 4 FEB 28
                 data from INPADOC
                 BABS - Current-awareness alerts (SDIs) available
 NEWS 5 FEB 28
 NEWS 6 FEB 28 MEDLINE/LMEDLINE reloaded
         MAR 02 GBFULL: New full-text patent database on STN
 NEWS 7
 NEWS 8 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced
 NEWS 9 MAR 03 MEDLINE file segment of TOXCENTER reloaded
 NEWS 10 MAR 22
                 KOREAPAT now updated monthly; patent information enhanced
 NEWS 11 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY
 NEWS 12 MAR 22 PATDPASPC - New patent database available
 NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags
 NEWS 14 APR 04 EPFULL enhanced with additional patent information and new
                 fields
 NEWS 15 APR 04 EMBASE - Database reloaded and enhanced
     16 APR 18 New CAS Information Use Policies available online
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 NEWS EXPRESS
              JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
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=> s plant transformation and (adverse effect)
L1 109 PLANT TRANSFORMATION AND (ADVERSE EFFECT)

=> s plant transformation and phenotypic change L2 63 PLANT TRANSFORMATION AND PHENOTYPIC CHANGE

=> s (transform plant) and (nucleic acid) and (phenotype)

2 FILES SEARCHED...

3 FILES SEARCHED...

L3 556 (TRANSFORM PLANT) AND (NUCLEIC ACID) AND (PHENOTYPE)

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ENTER L# LIST OR (END):13
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L4 555 DUP REM L3 (1 DUPLICATE REMOVED)

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L2 ANSWER 1 OF 63 MEDLINE on STN

TI Vector construction for gene overexpression as a tool to elucidate gene function.

Gene overexpression as a means to determine plant gene function has been used almost since the first plant transformation protocols became viable. The goal of these experiments, as in classical genetic experiments, is to observe any phenotypic change associated with changing the expression of a gene of interest-in this case overexpression. Any phenotypic changes are interpreted, and the native gene's function is deduced based on the pathways or biochemistries that are altered in the transformants. Overexpression experiments may be particularly suitable in instances when genes are functionally redundant, when a plant species does not have good genetics, or when a knockout mutation is particularly deleterious. This chapter is intended as a general protocol for producing gene overexpression constructs, starting with genomic DNA, RNA, or an isolated clone, for use in plants that are transformable by Agrobacterium.

ACCESSION NUMBER: 2003441512 MEDLINE DOCUMENT NUMBER: PubMed ID: 14501074

TITLE: Vector construction for gene overexpression as a tool to

elucidate gene function.

AUTHOR: Lloyd Alan

CORPORATE SOURCE: Section of Molecular Cell and Developmental Biology,

Institute for Cellular and Molecular Biology, The University of Texas at Austin, Austin, TX, USA.

SOURCE: Methods in molecular biology (Clifton, N.J.), (2003) 236

329-44.

Journal code: 9214969. ISSN: 1064-3745.

PUB. COUNTRY: United States

DOCUMENT TYPE:

Journal; Article; (JOURNAL ARTICLE)

LANGUAGE:

English

FILE SEGMENT:

ENTRY DATE:

TI

Priority Journals

ENTRY MONTH:

200402 Entered STN: 20030923

Last Updated on STN: 20040212 Entered Medline: 20040211

L2 ANSWER 2 OF 63 USPATFULL on STN

Plant transcriptional regulators of abiotic stress

The invention relates to plant transcription factor polypeptides, polynucleotides that encode them, homologs from a variety of plant species, and methods of using the polynucleotides and polypeptides to produce transgenic plants having advantageous properties compared to a reference plant, including improved abiotic stress tolerance. Sequence information related to these polynucleotides and polypeptides can also be used in bioinformatic search methods to identify related sequences and is also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2005:100799 USPATFULL

TITLE:
INVENTOR(S):

Plant transcriptional regulators of abiotic stress Heard, Jacqueline E., Stonington, CT, UNITED STATES

Keddie, James S., San Mateo, CA, UNITED STATES

Creelman, Robert A., Castro Valley, CA, UNITED STATES Pineda, Omaira, Vero Beach, FL, UNITED STATES

Jiang, Cai-Zhong, Fremont, CA, UNITED STATES
Ratcliffe, Oliver, Oakland, CA, UNITED STATES

Kumimoto, Roderick W., San Bruno, CA, UNITED STATES

Gutterson, Neal I., Oakland, CA, UNITED STATES Sherman, Bradley K., Berkeley, CA, UNITED STATES

PATENT ASSIGNEE(S):

Mendel Biotechnology, Inc., Hayward, CA, UNITED STATES

(U.S. corporation)

NUMBER	KIND	DATE	
		<b>-</b>	
70 0005006910	3.4	00050404	

PATENT INFORMATION:
APPLICATION INFO.:
RELATED APPLN. INFO.:

US 2005086718 A1 20050421 US 2003-675852 A1 20030930 (10)

Continuation-in-part of Ser. No. US 2003-412699, filed on 10 Apr 2003, PENDING Continuation-in-part of Ser. No. US 2000-533030, filed on 22 Mar 2000, ABANDONED Continuation-in-part of Ser. No. US 2002-171468, filed on 14 Jun 2002, ABANDONED Continuation-in-part of Ser. No. US 2000-713994, filed on 16 Nov 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-713994, filed on 16 Nov 2000, ABANDONED Continuation-in-part of Ser. No. US 2002-112887, filed on 18 Mar 2002, PENDING Continuation-in-part of Ser. No. US 2002-286264, filed on 1 Nov 2002, PENDING Division of Ser. No. US 2000-533030, filed on 22 Mar 2000, ABANDONED Continuation-in-part of Ser. No. US 2002-225068, filed on 9 Aug 2002, PENDING Continuation-in-part of Ser. No. US 2002-171468, filed on 14 Jun 2002, ABANDONED Continuation-in-part of Ser. No. US 2001-837944, filed on 18 Apr 2001, ABANDONED Continuation-in-part of Ser. No. US 2002-225066, filed on 9 Aug 2002, PENDING Continuation-in-part of Ser. No. US 2003-374780, filed on 25 Feb 2003, PENDING Continuation-in-part of Ser. No. US 2001-837944, filed on 18 Apr 2001, ABANDONED Continuation-in-part of Ser. No. US 2003-666642, filed on 18 Sep 2003, PENDING

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1999-166228P	19991117	(60)
	US 1999-166228P	19991117	(60)
	US 1999-125814P	19990323	(60)
	US 2001-310847P	20010809	(60)

20011119 (60) US 2001-336049P US 2001-336049P US 2002-434166P 20011119 (60) 20021217 (60) US 2002-411837P 20020918 (60)

, DOCUMENT TYPE: Utility APPLICATION FILE SEGMENT:

Mendel Biotechnology, Inc., 21375 Cabot Blvd., Hayward, LEGAL REPRESENTATIVE:

CA, 94545, US

NUMBER OF CLAIMS: 23 1 EXEMPLARY CLAIM:

16 Drawing Page(s) NUMBER OF DRAWINGS:

LINE COUNT: 7785

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 3 OF 63 USPATFULL on STN L2

Transgenic plants and methods for production thereof TI

Genetic constructs, transformation vectors and methods are taught for ABproduction of transgenic plants which can be selectively removed from a growing site by application of a chemical agent or physiological stress. The invention links a target gene for the trait of commercial interest to a conditionally lethal gene, which can be selectively expressed to cause plant death. By use of the genetic constructs, transformation vectors and methods of the present invention, invasion of environments and contamination of commercial non-engineered productions by transgenic plants can be avoided. Methods are also taught for transformation of Brassica species.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2005:70620 USPATFULL

Transgenic plants and methods for production thereof TITLE:

Keller, Wilfred A., Saskatoon, CANADA INVENTOR(S): Fabijanski, Steven F., Orleans, CANADA

Arnison, Paul G., Orleans, CANADA

Hammerlindl, Joseph K., Saskatoon, CANADA

Webb, Steven R., Saskatoon, CANADA

NUMBER KIND DATE US 2005060768 A1 20050317

US 2004-806121 A1 20040323 APPLICATION INFO.: (10)

Continuation of Ser. No. US 2001-886207, filed on 22 RELATED APPLN. INFO.: Jun 2001, GRANTED, Pat. No. US 6753459 Continuation of

Ser. No. WO 1999-CA1223, filed on 22 Dec 1999, UNKNOWN

NUMBER DATE

US 1998-113546P 19981222 (60) PRIORITY INFORMATION:

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: LORUSSO, LOUD & KELLY, 3137 Mount Vernon Avenue,

Alexandria, VA, 22305

58 NUMBER OF CLAIMS: EXEMPLARY CLAIM:

PATENT INFORMATION:

NUMBER OF DRAWINGS: 6 Drawing Page(s)

LINE COUNT: 1531

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 4 OF 63 USPATFULL on STN L2

TI Plant regulatory sequences for selective control of gene expression The current invention relates to enhancing gene expression in the roots, AB flowers, seeds, and pod wall of plants. More specifically the invention relates to a promoter that could be used to drive the expression of structural genes or other DNA sequences. We disclose the sequence of said promoter and give examples showing the function of said promoter.

CAS INDEXING IS AVAILABLE FOR THIS PATENT. ACCESSION NUMBER: 2005:58661 USPATFULL

TITLE: Plant regulatory sequences for selective control of gene expression

INVENTOR(S): Bhat, Deepti G., San Diego, CA, UNITED STATES

Tennessen, Daniel J., St. Louis, MO, UNITED STATES

APPLICATION INFO.: US 2004-840987 A1 20040507 (10)

NUMBER DATE

PRIORITY INFORMATION: US 2003-468502P 20030507 (60)

US 2003-482308P 20030625 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: MONSANTO COMPANY, 800 N. LINDBERGH BLVD., ATTENTION:

G.P. WUELLNER, IP PARALEGAL, (E2NA), ST. LOUIS, MO,

63167

NUMBER OF CLAIMS: 5

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 3 Drawing Page(s)

LINE COUNT: 1579

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 5 OF 63 USPATFULL on STN

TI Plants having modified reproductive capacity

AB This invention relates to plants having modified reproductive capacity.

In particular, it relates to a plant reproductive tissue specific

promoter, the PrAG1 promoter isolated from Pinus radiata, and its use in

promoting transcription/expression of associated sequences in plant

reproductive tissue, including for the purpose of producing plants which have diminished reproductive capacity or which are sterile.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2005:46153 USPATFULL

TITLE: Plants having modified reproductive capacity

INVENTOR(S): Podila, Gopi Krishna, Houghton, MI, United States

Liu, Jun-Jun, Houghton, MI, United States

Karnosky, David F., Chassell, MI, United States

PATENT ASSIGNEE(S): Carter Holt Harvey Limited, Manakau City, NEW ZEALAND

(non-U.S. corporation)

Rubicon IP Limited, Auckland, NEW ZEALAND (non-U.S.

corporation)

Michigan Technological University, Houghton, MI, United

20020329 PCT 371 date

States (U.S. corporation)

NUMBER DATE

PRIORITY INFORMATION: NZ 1999-334715 19990317

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Fox, David T.

LEGAL REPRESENTATIVE: Greenlee Winner and Sullivan PC

NUMBER OF CLAIMS: 30 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS:

9 Drawing Figure(s); 7 Drawing Page(s)

LINE COUNT: 1206

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

TI DNA constructs and methods to enhance the production of commercially

viable transgenic plants

The present invention has incorporated a non-lethal negative selectable marker gene into the vector backbone DNA of a DNA plasmid used to transform plant cells. These transgenes are designed to express a non-lethal gene product in plant cells that contain the vector backbone DNA of the DNA plasmid. The gene products of the non-lethal negative selectable marker gene are involved in plant hormone biosynthesis pathways, plant hormone substrate diversion, plant hormone degradation, plant hormone signaling or metabolic interference. The use of these DNA plasmids to transform plant cells provides for the enhanced production of commercially viable plants.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:301270 USPATFULL

TITLE: DNA constructs and methods to enhance the production of

commercially viable transgenic plants

INVENTOR(S): Gilbertson, Larry A., Chesterfield, MO, UNITED STATES

Krieger, Elysia K., Kirkwood, MO, UNITED STATES Zhang, Wanggen, Wildwood, MO, UNITED STATES

Ye, Xudong, Madison, WI, UNITED STATES

PATENT INFORMATION: US 2004237142 A1 20041125

APPLICATION INFO.: US 2004-821711 A1 20040408 (10)

NUMBER DATE

PRIORITY INFORMATION: US 2003-461459P 20030409 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Gail P. Wuellner, Patent Department, E2NA, Monsanto

Company, 800 N. Lindbergh Boulevard, St. Louis, MO,

63167

NUMBER OF CLAIMS: 23 EXEMPLARY CLAIM: 1

TI

NUMBER OF DRAWINGS: 26 Drawing Page(s)

LINE COUNT: 1832

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 7 OF 63 USPATFULL on STN

Antibody-mediated down-regulation of plant proteins

AB Monoclonal antibodies expressed in plant cells bind targeted transit peptides to decrease steady state levels of passenger proteins in plant organelles.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:186667 USPATFULL

TITLE: Antibody-mediated down-regulation of plant proteins INVENTOR(S): Sukhapinda, Kitisri, Zionsville, IN, United States

Hasler, James M., Danville, IN, United States Petell, James K., Zionsville, IN, United States

Strickland, James A., Goodlettsville, TN, United States

Folkerts, Otto, Guilford, CT, United States

PATENT ASSIGNEE(S): Dow AgroSciences LLC, Indianapolis, IN, United States

(U.S. corporation)

NUMBER DATE

PRIORITY INFORMATION: US 1998-93587P 19980721 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Bui, Pr ASSISTANT EXAMINER: Collins

Bui, Phuong T. Collins, Cynthia

LEGAL REPRESENTATIVE:

Maciak, Ronald S., Stuart, Donald R.

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

3 1

NUMBER OF DRAWINGS:

0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT:

3329

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 8 OF 63 USPATFULL on STN

TI Whisker-mediated transformation of plant cell aggregates and plant

tissues and regeneration of plants thereof

AB Plant cell aggregates and plant tissues can be transformed by elongated, needle-like structures called "whiskers". The process comprises the agitation of plant cell aggregates and plant tissues of the plant to be transformed in the presence of DNA and whiskers, whereby DNA uptake and integration thereof is facilitated. The process may be applicable to other plant cell aggregates and plant tissues which have not proven easily transformable by other techniques.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2004:167223 USPATFULL

TITLE:

Whisker-mediated transformation of plant cell

aggregates and plant tissues and regeneration of plants

thereof

INVENTOR(S):

Petolino, Joseph F., Zionsville, IN, UNITED STATES

Pareddy, Dayakar R., Carmel, IN, UNITED STATES

Hopkins, Nicole L., Indianapolis, IN, UNITED STATES Armstrong, Katherine, Zionsville, IN, UNITED STATES

NUMBER	KIND	DATE

PATENT INFORMATION:

US 2004128715 A1 20040701

APPLICATION INFO.: RELATED APPLN. INFO.:

US 2004-756980 A1 20040113 (10)

Division of Ser. No. US 2001-24070, filed on 18 Dec 2001, GRANTED, Pat. No. US 6730824 Division of Ser. No. US 1999-239706, filed on 28 Jan 1999, GRANTED, Pat. No.

US 6350611

NUMBER DATE

PRIORITY INFORMATION:

US 1998-72944P

19980129 (60)

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE:

DOW AGROSCIENCES LLC, 9330 ZIONSVILLE RD, INDIANAPOLIS,

IN, 46268

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

11

LINE COUNT:

1 1724

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 9 OF 63 USPATFULL on STN

TI Methods for modifying plant biomass and abiotic stress

The invention relates to plant transcription factor polypeptides, polynucleotides that encode them, homologs from a variety of plant species, and methods of using the polynucleotides and polypeptides to produce transgenic plants having advantageous properties, including increased biomass and improved abiotic stress and osmotic stress tolerance, as compared to wild-type or reference plants. Sequence information related to these polynucleotides and polypeptides can also be used in bioinformatic search methods to identify related sequences and is also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2004:167220 USPATFULL

TITLE:

Methods for modifying plant biomass and abiotic stress

INVENTOR(S): Jiang, Cai-Zhong, Fremont, CA, UNITED STATES

Heard, Jacqueline E., Stonington, CT, UNITED STATES

Ratcliffe, Oliver, Oakland, CA, UNITED STATES
Gutterson, Neal I., Oakland, CA, UNITED STATES
Hempel, Frederick D., Albany, CA, UNITED STATES
Kumimoto, Roderick W., San Bruno, CA, UNITED STATES
Keddie, James S., San Mateo, CA, UNITED STATES
Sherman, Bradley K., Berkeley, CA, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION:
APPLICATION INFO.:
RELATED APPLN. INFO.:

US 2004128712 A1 20040701 US 2003-669824 A1 20030923 (10)

Continuation-in-part of Ser. No. US 2003-374780, filed on 25 Feb 2003, PENDING Continuation-in-part of Ser. No. US 2000-506720, filed on 17 Feb 2000, ABANDONED

Continuation-in-part of Ser. No. US 2003-412699, filed on 10 Apr 2003, PENDING Continuation-in-part of Ser. No. US 2000-533392, filed on 22 Mar 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-533029, filed

on 22 Mar 2000, GRANTED, Pat. No. US 6664446

Continuation-in-part of Ser. No. US 2000-532091, filed

on 21 Mar 2000, GRANTED, Pat. No. US 6421114

Continuation-in-part of Ser. No. US 2000-713994, filed on 16 Nov 2000, ABANDONED Continuation-in-part of Ser.

No. US 2001-996140, filed on 26 Nov 2001, PENDING Continuation-in-part of Ser. No. US 2001-823676, filed

on 30 Mar 2001, GRANTED, Pat. No. US 6717034

Continuation-in-part of Ser. No. US 2003-421138, filed on 23 Apr 2003, PENDING Continuation-in-part of Ser. No. US 2001-934455, filed on 22 Aug 2001, PENDING Continuation-in-part of Ser. No. US 2000-533030, filed

on 22 Mar 2000, ABANDONED Continuation-in-part of Ser. No. US 2002-255068, filed on 26 Sep 2002, PENDING

Continuation-in-part of Ser. No. US 2002-225066, filed on 9 Aug 2002, PENDING Continuation-in-part of Ser. No. US 2002-225067, filed on 9 Aug 2002, PENDING

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Jeffrey M. Libby, Ph.D., Mendel Biotechnology, Inc.,

21375 Cabot Blvd., Hayward, CA, 94545

NUMBER OF CLAIMS: 21 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 22 Drawing Page(s)

LINE COUNT: 7663

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 10 OF 63 USPATFULL on STN

TI Methods and compositions for production of flavonoid and isoflavonoid nutraceuticals

The invention provides method and compositions for the modulation of flavanone and/or isoflavone production in plants. The methods of the invention allow creation of plants having novel phenotypes. Increased expression of isoflavones in particular in plants may be used to increase the nutritional value of food plants for both human and animal consumption. The invention overcomes limitations of the prior art which prevented accumulation of high levels of isoflavones in plants.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:167219 USPATFULL

TITLE: Methods and compositions for production of flavonoid

and isoflavonoid nutraceuticals

INVENTOR(S): Dixon, Richard A., Ardmore, OK, UNITED STATES

Liu, Chang-Jun, La Jolla, CA, UNITED STATES Deavours, Bettina, Ardmore, OK, UNITED STATES

PATENT ASSIGNEE(S): The Samuel Roberts Noble Foundation (U.S. corporation)

APPLICATION INFO.: US 2003-659755 A1 20030910 (10)

NUMBER DATE

PRIORITY INFORMATION: US 2002-409447P 20020910 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: FULBRIGHT & JAWORSKI L.L.P., 600 CONGRESS AVE., SUITE

2400, AUSTIN, TX, 78701

NUMBER OF CLAIMS: 50 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 7 Drawing Page(s)

LINE COUNT: 2829

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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FILE 'MEDLINE, USPATFULL, DGENE, EMBASE, WPIDS, FSTA, JICST-EPLUS,

BIOSIS' ENTERED AT 14:37:13 ON 21 APR 2005

L1 109 S PLANT TRANSFORMATION AND (ADVERSE EFFECT)
L2 63 S PLANT TRANSFORMATION AND PHENOTYPIC CHANGE

L3 556 S (TRANSFORM PLANT) AND (NUCLEIC ACID) AND (PHENOTYPE)

L4 555 DUP REM L3 (1 DUPLICATE REMOVED)

=> s l1 and l4

AB

6 FILES SEARCHED...

L5 20 L1 AND L4

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L5 ANSWER 1 OF 20 USPATFULL on STN

TI Method for increasing product yield

The present invention relates to methods for increasing the yield of a compound produced by an organism. More particularly, the present invention relates to methods for increasing the total or soluble carbohydrate content or sweetness or increasing the content of an endogenous carbohydrate of a plant tissue by producing a sugar-metabolizing enzyme that catalyzes the conversion of an endogenous sugar (one that is normally produced in the plant) to an alien sugar (one that is not normally produced in the plant at the same developmental stage). The invention also relates to plants and plant parts that produce a sugar-metabolizing enzyme to yield an alien sugar, with the consequence of higher total fermentable carbohydrate content, and to fermentable carbohydrates and other products derived therefrom.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2005:6215 USPATFULL

TITLE: Method for increasing product yield

INVENTOR(S): Birch, Robert George, Jindalee, AUSTRALIA

Wu, Luguang, Kenmore, AUSTRALIA

PATENT ASSIGNEE(S): The University of Queensland, St. Lucia, AUSTRALIA

(non-U.S. corporation)

PATENT INFORMATION: US 2005005323 A1 20050106 APPLICATION INFO.: US 2004-845059 A1 20040512 (10)

NUMBER DATE

PRIORITY INFORMATION: AU 2003-2003902253 20030512

PRIORITY INFORMATION: AU 2003-2003902253 2003051

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH

AVE, SUITE 6300, SEATTLE, WA, 98104-7092

NUMBER OF CLAIMS: 51 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 21 Drawing Page(s)

LINE COUNT: 3929

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 2 OF 20 USPATFULL on STN

TI Polynucleotides and polypeptides in plants

The invention relates to plant transcription factor polypeptides, polynucleotides that encode them, homologs from a variety of plant species, and methods of using the polynucleotides and polypeptides to produce transgenic plants having advantageous properties compared to a reference plant. Sequence information related to these polynucleotides and polypeptides can also be used in bioinformatic search methods and is also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2004:59042 USPATFULL

TITLE:

AB

INVENTOR(S):

Polynucleotides and polypeptides in plants Zhang, James, Palo Alto, CA, UNITED STATES Fromm, Michael E., Lincoln, NE, UNITED STATES Heard, Jacqueline E., San Mateo, CA, UNITED STATES Riechmann, Jose Luis, Pasadena, CA, UNITED STATES Adam, Luc J., Hayward, CA, UNITED STATES Broun, Pierre E., York, UNITED KINGDOM Pineda, Omaira, Vero Beach, FL, UNITED STATES Reuber, T. Lynne, San Mateo, CA, UNITED STATES Keddie, James S., San Mateo, CA, UNITED STATES Yu, Guo-Liang, Berkeley, CA, UNITED STATES Jiang, Cai-Zhong, Fremont, CA, UNITED STATES Samaha, Raymond S., Capitola, CA, UNITED STATES Pilgrim, Marsha L., Phoenixville, PA, UNITED STATES Creelman, Robert A., Castro Valley, CA, UNITED STATES DuBell, Arnold N., San Leandro, CA, UNITED STATES Ratcliffe, Oliver, Oakland, CA, UNITED STATES Kumimoto, Roderick, San Bruno, CA, UNITED STATES Sherman, Bradley K., Berkeley, CA, UNITED STATES

## NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.: RELATED APPLN. INFO.

US 2004045049 A120040304 (10) A120030410 US 2003-412699 Continuation-in-part of Ser. No. WO 2000-US9448, filed on 6 Apr 2000, PENDING Continuation-in-part of Ser. No. US 1999-394519, filed on 13 Sep 1999, ABANDONED Continuation-in-part of Ser. No. US 2000-489376, filed on 21 Jan 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-506720, filed on 17 Feb 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-533030, filed on 22 Mar 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-533392, filed on 22 Mar 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-533029, filed on 22 Mar 2000, GRANTED, Pat. No. US 6664446 Continuation-in-part of Ser. No. US 2000-532591, filed on 22 Mar 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-533648, filed on 22 Mar 2000, ABANDONED Continuation-in-part of Ser. No. US 2002-958131, filed on 30 Jan 2002, PENDING Continuation-in-part of Ser. No. US 2000-713994, filed on 16 Nov 2000, PENDING Continuation-in-part of Ser. No. US 2001-819142, filed on 27 Mar 2001, ABANDONED Continuation-in-part of Ser. No. US 2001-837444, filed on 17 Apr 2001, GRANTED, Pat. No. US 6392092 Continuation-in-part of Ser. No. US 2002-171468, filed on 14 Jun 2002, ABANDONED Continuation-in-part of Ser. No. US 2002-225066, filed on 9 Aug 2002, PENDING Continuation-in-part of Ser. No. US 2002-225067, filed on 9 Aug 2002, PENDING Continuation-in-part of Ser. No. US 2002-225068, filed

on 9 Aug 2002, PENDING Continuation-in-part of Ser. No. US 2003-374780, filed on 25 Feb 2003, PENDING

NUMBER DATE

PRIORITY INFORMATION: US 2002-434166P 20021217 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: MATTHEW KASER, Mendel Biotechnology, Inc., 21375 Cabot

Blvd., Hayward, CA, 94545

NUMBER OF CLAIMS: 111
EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS:

21 Drawing Page(s)

LINE COUNT: 18175

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 3 OF 20 USPATFULL on STN

TI Polynucleotides and polypeptides in plants

The invention relates to plant transcription factor polypeptides, polynucleotides that encode them, homologs from a variety of plant species, and methods of using the polynucleotides and polypeptides to produce transgenic plants having advantageous properties compared to a reference plant. Sequence information related to these polynucleotides and polypeptides can also be used in bioinformatic search methods and is also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:26083 USPATFULL

TITLE: Polynucleotides and polypeptides in plants

INVENTOR(S): Sherman, Bradley K., Berkeley, CA, UNITED STATES

Riechmann, Jose Luis, Pasadena, CA, UNITED STATES

Jiang, Cai-Zhong, Fremont, CA, UNITED STATES

Heard, Jacqueline E., San Mateo, CA, UNITED STATES

Haake, Volker, Menlo Park, CA, UNITED STATES

Creelman, Robert A., Castro Valley, CA, UNITED STATES

Ratcliffe, Oliver, Oakland, CA, UNITED STATES

Adam, Luc J., Hayward, CA, UNITED STATES

Reuber, T. Lynne, San Mateo, CA, UNITED STATES Keddie, James, San Mateo, CA, UNITED STATES Broun, Pierre E., San Mateo, CA, UNITED STATES

Pilgrim, Marsha L., Phoenixville, PA, UNITED STATES DuBell, Arnold N., III, San Leandro, CA, UNITED STATES

Pineda, Omaira, Vero Beach, FL, UNITED STATES Yu, Guo-Liang, Berkeley, CA, UNITED STATES

NUMBER	KIND	DATE

PATENT INFORMATION: US 2004019927 A1 20040129

APPLICATION INFO.: US 2003-374780 Al 20030225 (10)
RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2001-837944, filed

on 18 Apr 2001, ABANDONED

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: MATTHEW KASER, Mendel Biotechnology, Inc., 21375 Cabot

Blvd., Hayward, CA, 94545

NUMBER OF CLAIMS: 112 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 14 Drawing Page(s)

LINE COUNT: 32531

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 4 OF 20 USPATFULL on STN

TI Gene sequences and uses thereof in plants

The invention provides polynucleotides and proteins encoded by the polypeptides. The disclosed polynucleotides and polypeptides find use in production of transgenic plants to produce plants having improved properties. The invention further provides methods of producing fertile transgenic plants, preferably maize, with desirable phenotypes and

progeny of any generation derived from the fertile transgenic plants.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:331453 USPATFULL

TITLE: Gene sequences and uses thereof in plants

INVENTOR(S): Edgerton, Michael D., St. Louis, MO, UNITED STATES

Chomet, Paul S., Mystic, CT, UNITED STATES

Laccetti, Lucille B., Groton, CT, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION: US 2003233670 A1 20031218

APPLICATION INFO.: US 2002-310154 A1 20021204 (10)

NUMBER DATE

PRIORITY INFORMATION: US 2001-337358P 20011204 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: MONSANTO COMPANY, 800 N. LINDBERGH BLVD., ATTENTION:

G.P. WUELLNER, IP PARALEGAL, (E2NA), ST. LOUIS, MO,

63167 .

NUMBER OF CLAIMS: 28 EXEMPLARY CLAIM: 1

TI

AB

NUMBER OF DRAWINGS: 2 Drawing Page(s)

LINE COUNT: 14098

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 5 OF 20 USPATFULL on STN

DNA sequences encoding polypeptides having beta-1,3-glucanase activity The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired. A novel signal peptide sequence and corresponding DNA coding sequence is also provided. Further provided are assays for the identification and isolation of additional chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:273505 USPATFULL

TITLE: DNA sequences encoding polypeptides having

beta-1,3-glucanase activity

INVENTOR(S): Meins, Jr., Frederick, Riehen, SWITZERLAND

Shinshi, Hideaki, Tsuchiura, JAPAN

Wenzler, Herman C., Plano, TX, United States

Hofsteenge, Jan, Reinach, SWITZERLAND Ryals, John A., Cary, NC, United States

Sperisen, Christoph, Birmensdorf, SWITZERLAND

PATENT ASSIGNEE(S): Novartis Finance Corporation, New York, NY, United

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.: RELATED APPLN. INFO.:

20031014 B1 US 6632981 20010716 US 2001-906234 (9)

Division of Ser. No. US 1999-350600, filed on 9 Jul 1999, now patented, Pat. No. US 6262342 Continuation of Ser. No. US 1997-971217, filed on 14 Nov 1997, now patented, Pat. No. US 5942662 Continuation of Ser. No. US 1995-457634, filed on 31 May 1995, now patented, Pat. No. US 5847258 Division of Ser. No. US 1994-181271, filed on 13 Jan 1994, now patented, Pat. No. US 5614395 Continuation-in-part of Ser. No. US 1993-93301, filed on 16 Jul 1993, now abandoned Continuation of Ser. No. US 1992-973197, filed on 6 Nov 1992, now abandoned Continuation of Ser. No. US 1991-678378, filed on 1 Apr 1991, now abandoned Continuation of Ser. No. US 1989-305566, filed on 6 Feb 1989, now abandoned Continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned Continuation-in-part of Ser. No. US 1993-42847, filed on 6 Apr 1993, now abandoned Continuation of Ser. No. US 1990-632441, filed on 21 Dec 1990, now abandoned Continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned Continuation-in-part of Ser. No. US 165667 Continuation-in-part of Ser. No. US 1992-848506, filed on 6 Mar 1992, now abandoned Continuation-in-part of Ser. No. US 1991-768122, filed on 27 Sep 1991, now abandoned Continuation-in-part of Ser. No. US 1990-580431, filed on 7 Sep 1990, now abandoned Continuation-in-part of Ser. No. US 425504 Continuation-in-part of Ser. No. US 1989-368672, filed on 20 Jun 1989, now abandoned Continuation-in-part of Ser. No. US 1989-329018, filed on 24 Mar 1989, now abandoned Continuation-in-part of Ser. No. US 1989-381443, filed on 18 Jul 1989, now abandoned Continuation-in-part of Ser. No. US 1989-353312, filed on 17 May 1989, now abandoned Continuation-in-part of Ser. No. US 1988-226303, filed on 29 Jul 1988, now abandoned Continuation-in-part of Ser. No. US 1993-45957, filed on 12 Apr 1993, now abandoned Utility

DOCUMENT TYPE:

FILE SEGMENT:

PRIMARY EXAMINER:

LEGAL REPRESENTATIVE:

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

TI

AB

NUMBER OF DRAWINGS:

10818 LINE COUNT: CAS INDEXING IS AVAILABLE FOR THIS PATENT.

GRANTED

Fox, David T.

ANSWER 6 OF 20 USPATFULL on STN L5

> DNA sequences encoding polypeptides having  $\beta$ -1,3-glucanase activity The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired. A novel signal peptide sequence and corresponding DNA coding sequence is also provided. Further

Meigs, J. Timothy, Lebel, Edouard G.

40 Drawing Figure(s); 40 Drawing Page(s)

provided are assays for the identification and isolation of additional chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

2001:112606 USPATFULL ACCESSION NUMBER:

DNA sequences encoding polypeptides having TITLE:

 $\beta$ -1,3-glucanase activity

Meins, Jr., Frederick, Riehen, Switzerland INVENTOR(S):

Shinshi, Hideaki, Tsuchiura, Japan

Wenzler, Herman C., Plano, TX, United States

Hofsteenge, Jan, Reinach, Switzerland Ryals, John A., Cary, NC, United States

Sperisen, Christoph, Birmensdorf, Switzerland

Novartis Finance Corporation, New York, NY, United PATENT ASSIGNEE(S):

States (U.S. corporation)

DATE NUMBER KIND

PATENT INFORMATION: APPLICATION INFO.: RELATED APPLN. INFO.:

B1 20010717 US 6262342 19990709 (9) US 1999-350600

Continuation of Ser. No. US 1997-971217, filed on 14 Nov 1997, now patented, Pat. No. US 5942662 Continuation of Ser. No. US 1995-457364, filed on 31 May 1995, now patented, Pat. No. US 5847258 Division of Ser. No. US 1994-181271, filed on 13 Jan 1994, now patented, Pat. No. US 5614395 Continuation-in-part of Ser. No. US 1993-93301, filed on 16 Jul 1993, now abandoned Continuation of Ser. No. US 1992-973197, filed on 6 Nov 1992, now abandoned Continuation of Ser. No. US 1991-678378, filed on 1 Apr 1991, now abandoned Continuation of Ser. No. US 1989-305566, filed on 6 Feb 1989, now abandoned Continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said Ser. No. US 181271 Continuation-in-part of Ser. No. US 1993-42847, filed on 6 Apr 1993, now abandoned Continuation of Ser. No. US 1990-632441, filed on 21 Dec 1990, now abandoned Continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned Continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said Ser. No. US 181271 Continuation-in-part of Ser. No. US 1992-848506, filed on 6 Mar 1992, now abandoned Continuation-in-part of Ser. No. US 1991-768122, filed on 27 Sep 1991, now abandoned Continuation-in-part of Ser. No. US 1990-580431, filed on 7 Sep 1990, now abandoned Continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned Continuation-in-part of Ser. No. US 1989-368672, filed on 20 Jun 1989, now abandoned Continuation-in-part of Ser. No. US 1989-329018, filed on 24 Mar 1989, now abandoned, said Ser. No. US 425504 Continuation-in-part of Ser. No. US 1989-381443, filed on 18 Jul 1989, now abandoned Continuation-in-part of Ser. No. US 1989-353312, filed on 17 May 1989, now abandoned Continuation-in-part of Ser. No. US 1988-226303, filed on 29 Jul 1988, now abandoned , said Ser. No. US 181271 Continuation-in-part of Ser. No. US 1993-45957, filed on 12 Apr 1993, now abandoned

Utility DOCUMENT TYPE: GRANTED FILE SEGMENT: Fox, David T. PRIMARY EXAMINER: Meigs, J. Timothy LEGAL REPRESENTATIVE:

7 NUMBER OF CLAIMS: EXEMPLARY CLAIM:

40 Drawing Figure(s); 40 Drawing Page(s) NUMBER OF DRAWINGS:

LINE COUNT:

8911

ANSWER 7 OF 20 USPATFULL on STN

Inducible herbicide resistance

TI AB

The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired A novel signal peptide sequence and corresponding DNA coding sequence is also provided. Further provided are assays for the identification and isolation of additional chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

1999:99810 USPATFULL

INVENTOR(S):

TITLE:

L5

Inducible herbicide resistance

Ryals, John A., Cary, NC, United States

Harms, Christian T., Bad Krozingen, Germany, Federal

Republic of

Friedrich, Leslie B., Apex, NC, United States

Beck, James J., Cary, NC, United States Uknes, Scott J., Apex, NC, United States Ward, Eric R., Durham, NC, United States

Novartis Finance Corporation, New York, NY, United PATENT ASSIGNEE(S):

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.: RELATED APPLN. INFO.: US 5942662 19990824 US 1997-971217 19971114 (8)

Continuation of Ser. No. US 1995-457364, filed on 31 May 1995, now patented, Pat. No. US 5847258 which is a division of Ser. No. US 1994-181271, filed on 13 Jan 1994, now patented, Pat. No. US 5614395 which is a continuation-in-part of Ser. No. US 1993-93301, filed on 16 Jul 1993, now abandoned which is a continuation of Ser. No. US 1992-973197, filed on 6 Nov 1992, now abandoned which is a continuation of Ser. No. US 1991-678378, filed on 1 Apr 1991, now abandoned which is a continuation of Ser. No. US 1989-305566, filed on 6 Feb 1989, now abandoned which is a continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned Ser. No. Ser. No. US 1994-181271, filed on 13 Jan 1994, now patented, Pat. No. US 5614395 which is a continuation-in-part of Ser. No. US 1993-42847, filed on 6 Apr 1993, now abandoned which is a continuation of Ser. No. US 1990-632441, filed on 21 Dec 1990, now abandoned which is a continuation of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned And a continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned Ser. No. Ser. No. US 1994-181271, filed on 13 Jan 1994, now patented, Pat. No. US 5614395 which is a continuation-in-part of Ser. No. US 1992-848506, filed

on 6 Mar 1992, now abandoned which is a continuation-in-part of Ser. No. US 1991-768122, filed

on 27 Sep 1991, now abandoned which is a

continuation-in-part of Ser. No. US 1990-580431, filed

on 7 Sep 1990, now abandoned which is a

continuation-in-part of Ser. No. US 1989-425504, filed

on 20 Oct 1989, now abandoned which is a

continuation-in-part of Ser. No. US 1989-368672, filed

on 20 Jun 1989, now abandoned which is a

continuation-in-part of Ser. No. US 1989-329018, filed on 24 Mar 1989, now abandoned Ser. No. Ser. No. US 1994-181271, filed on 13 Jan 1994, now patented, Pat. No. US 5614395 which is a continuation-in-part of Ser.

No. US 1993-45957, filed on 12 Apr 1993, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Fox, David T.

LEGAL REPRESENTATIVE: Meigs, J. Timothy, Stults, Larry W.

NUMBER OF CLAIMS: 46
EXEMPLARY CLAIM: 1,2,5

NUMBER OF DRAWINGS: 40 Drawing Figure(s); 40 Drawing Page(s)

LINE COUNT: 11506

TI

AB

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 8 OF 20 USPATFULL on STN

DNA encoding plant chitinases

The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired. A novel signal peptide sequence and corresponding DNA coding sequence is also provided. Further provided are assays for the identification and isolation of additional chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1999:31007 USPATFULL

TITLE: DNA encoding plant chitinases

INVENTOR(S): Ryals, John A., Durham, NC, United States

Ward, Eric R., Basel, Switzerland

Payne, George B., Ann Arbor, MI, United States

Moyer, Mary B., Cary, NC, United States Meins, Jr., Frederich, Reihen, Switzerland

PATENT ASSIGNEE(S): Novartis Finance Corporation, New York, NY, United

States (U.S. corporation)

APPLICATION INFO.: US 1995-455736 19950531 (8)
RELATED APPLN. INFO.: Division of Ser. No. US 1994-181271, filed on 13 Jan

1994, now patented, Pat. No. US 5614395 And Ser. No. US 1993-42847, filed on 6 Apr 1993, now abandoned And Ser. No. US 1992-848506, filed on 6 Mar 1992, now abandoned

And Ser. No. US 1993-45957, filed on 12 Apr 1993, now abandoned , said Ser. No. US 181271 which is a continuation-in-part of Ser. No. US 1993-93301, filed on 16 Jul 1993, now abandoned which is a continuation of Ser. No. US 1992-973197, filed on 6 Nov 1992, now abandoned which is a continuation of Ser. No. US 1991-678378, filed on 1 Apr 1991, now abandoned which is a continuation of Ser. No. US 1989-305566, filed on 6 Feb 1989, now abandoned which is a continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said Ser. No. US 42847 which is a continuation of Ser. No. US 1990-632441, filed on 21 Dec 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned And Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said Ser. No. US 848506 which is a continuation-in-part of Ser. No. US 1991-768122, filed on 27 Sep 1991, now abandoned which is a continuation-in-part of Ser. No. US 1990-580431, filed on 7 Sep 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-368672, filed on 20 Jun 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-329018, filed on 24 Mar 1989, now abandoned

DOCUMENT TYPE:

Utility

FILE SEGMENT:

Granted

PRIMARY EXAMINER:

Fox, David T.

LEGAL REPRESENTATIVE:

Meigs, J. Timothy

NUMBER OF CLAIMS:

18

EXEMPLARY CLAIM:

1,11,17

NUMBER OF DRAWINGS: LINE COUNT:

TI

AB

40 Drawing Figure(s); 40 Drawing Page(s) 10980

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5ANSWER 9 OF 20 USPATFULL on STN

Method of protecting plants from oomycete pathogens

The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired. A novel signal peptide sequence and corresponding DNA coding sequence is also provided Further provided are assays for the identification and isolation of additional chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT. 1999:1492 USPATFULL ACCESSION NUMBER:

Method of protecting plants from oomycete pathogens TITLE:

INVENTOR(S): Ryals, John A., Durham, NC, United States

Alexander, Danny C., Cary, NC, United States Goodman, Robert M., Madison, WI, United States

Ward, Eric R., Basel, Switzerland

PATENT ASSIGNEE(S):

Novartis Finance Corporation, New York, NY, United States (U.S. corporation)

NUMBER KIND DATE US 5856154 19990105

APPLICATION INFO.:

PATENT INFORMATION:

RELATED APPLN. INFO.:

US 1995-456240 19950531 (8) Division of Ser. No. US 1994-181271, filed on 13 Jan 1994, now patented, Pat. No. US 5614395 which is a continuation-in-part of Ser. No. US 1993-93301, filed on 16 Jul 1993, now abandoned which is a continuation of Ser. No. US 1992-923197, filed on 10 Nov 1992, now abandoned which is a continuation of Ser. No. US 1993-678378, filed on 1 Apr 1993, now abandoned which is a continuation of Ser. No. US 1989-305566, filed on 6 Feb 1989, now abandoned which is a continuation of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned And a continuation-in-part of Ser. No. US 1993-42847, filed on 6 Apr 1993, now abandoned which is a continuation of Ser. No. US 1990-632441, filed on 21 Dec 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned And Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned And a continuation-in-part of Ser. No. US 1992-848506, filed on 6 Mar 1992, now abandoned which is a continuation-in-part of Ser. No. US 1991-768122, filed on 27 Sep 1991, now abandoned which is a continuation-in-part of Ser. No. US 1990-580431, filed on 7 Sep 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-368672, filed on 20 Jun 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-329018, filed on 24 Mar 1989, now abandoned And a continuation-in-part of Ser. No. US 1993-45957, filed

on 12 Apr 1993, now abandoned

Utility DOCUMENT TYPE: Granted FILE SEGMENT: Fox, David T. PRIMARY EXAMINER: Meigs, J. Timothy LEGAL REPRESENTATIVE:

NUMBER OF CLAIMS: 14 EXEMPLARY CLAIM:

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AB

NUMBER OF DRAWINGS: 40 Drawing Figure(s); 40 Drawing Page(s)

LINE COUNT: 10994

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 10 OF 20 USPATFULL on STN L5

Process for isolating chemically regulatable DNA sequences The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired. A novel signal peptide sequence and corresponding DNA coding sequence is also provided. Further provided are assays for the identification and isolation of additional

chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1998:159700 USPATFULL

TITLE: Process for isolating chemically regulatable DNA

sequences

INVENTOR(S): Ryals, John A., Durham, NC, United States

Harms, Christian, Bad Krozingen, Germany, Federal

Republic of

PATENT ASSIGNEE(S): Novartis Finance Corporation, New York, NY, United

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 5851766 19981222
APPLICATION INFO.: US 1995-456262 19950531 (8)

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Campbell, Eggerton A. LEGAL REPRESENTATIVE: Meigs, J. Timothy

NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1

AB

NUMBER OF DRAWINGS: 40 Drawing Figure(s); 40 Drawing Page(s)

LINE COUNT: 10987

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 11 OF 20 USPATFULL on STN

TI DNA encoding  $\beta$ -1,3-glucanases

The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired. A novel signal peptide sequence and corresponding DNA coding sequence is also provided. Further provided are assays for the identification and isolation of additional chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1998:154555 USPATFULL

TITLE: DNA encoding  $\beta$ -1,3-glucanases

INVENTOR(S): Ryals, John A., Durham, NC, United States
Moyer, Mary B., Cary, NC, United States

Payne, George B., Ann Arbor, MI, United States

Ward, Eric R., Basel, Switzerland

PATENT ASSIGNEE(S): Novartis Finance Corporation, New York, NY, United

States (U.S. corporation)

RELATED APPLN. INFO.: Division of Ser. No. US 1994-181271, filed on 13 Jan

1994, now patented, Pat. No. US 5614395 which is a continuation-in-part of Ser. No. US 1993-93301, filed on 16 Jul 1993, now abandoned which is a continuation of Ser. No. US 1992-973197, filed on 6 Nov 1992, now abandoned which is a continuation of Ser. No. US 1991-678378, filed on 1 Apr 1991, now abandoned which is a continuation of Ser. No. US 1989-305566, filed on 6 Feb 1989, now abandoned which is a continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said Ser. No. US 1995-457364, filed on 31 May 1995 which is a continuation-in-part of Ser. No. US 1993-42847, filed on 6 Apr 1993, now abandoned which is a continuation of Ser. No. US 1990-632441, filed on 21 Dec 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned And Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said Ser. No. US 457364 which is a continuation-in-part of Ser. No. US 1992-848506, filed on 6 Mar 1992, now abandoned which is a continuation-in-part of Ser. No. US 1991-768122, filed on 27 Sep 1991, now abandoned which is a continuation-in-part of Ser. No. US 1990-580431, filed on 7 Sep 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-368672, filed on 20 Jun 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-329018, filed on 24 Mar 1989, now abandoned , said Ser. No. US 457364 which is a continuation-in-part of Ser. No. US 1993-45957, filed on 12 Apr 1993, now abandoned

DOCUMENT TYPE:

FILE SEGMENT:

PRIMARY EXAMINER:

LEGAL REPRESENTATIVE:

EXEMPLARY CLAIM:

LINE COUNT:

NUMBER OF DRAWINGS:

21 NUMBER OF CLAIMS: 1,14,20

40 Drawing Figure(s); 40 Drawing Page(s)

10994

Utility

Granted

Fox, David T.

Meigs, J. Timothy

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- ANSWER 12 OF 20 USPATFULL on STN
- Chemically regulatable and anti-pathogenic DNA sequences and uses TIthereof

AB The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired. A novel signal peptide sequence and corresponding DNA coding sequence is also provided. Further provided are assays for the identification and isolation of additional chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1998:108519 USPATFULL

TITE

TITLE: Chemically regulatable and anti-pathogenic DNA

sequences and uses thereof

INVENTOR(S): Gaffney, Thomas D., Chapel Hill, NC, United States

Ryals, John A., Cary, NC, United States Friedrich, Leslie B., Apex, NC, United States Uknes, Scott J., Apex, NC, United States

Ward, Eric R., Durham, NC, United States Kessmann, Helmut, Allschwil, Switzerland

Vernooij, Bernardus T., Raleigh, NC, United States Novartis Finance Corporation, New York, NY, United

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.:

PATENT ASSIGNEE(S):

US 5804693 19980908 US 1995-454876 19950531 (8)

RELATED APPLN. INFO.:

Division of Ser. No. US 1994-181271, filed on 13 Jan 1994, now patented, Pat. No. US 5614395 which is a continuation-in-part of Ser. No. US 1993-93301, filed on 16 Jul 1993, now abandoned which is a continuation of Ser. No. US 1992-973197, filed on 6 Nov 1992, now abandoned which is a continuation of Ser. No. US 1991-678378, filed on 1 Apr 1991, now abandoned which is a continuation of Ser. No. US 1989-305566, filed on 6 Feb 1989, now abandoned which is a

continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said Ser. No. US 181271 which is a continuation-in-part of Ser. No. US 1993-42847, filed on 6 Apr 1993, now abandoned which is a continuation of Ser. No. US 1990-632441, filed on 21 Dec 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned And Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said Ser. No. US 181271 which is

1988, now abandoned , said Ser. No. US 181271 which is a continuation-in-part of Ser. No. US 1992-848506, filed on 6 Mar 1992, now abandoned which is a continuation-in-part of Ser. No. US 1991-768122, filed on 27 Sep 1991, now abandoned which is a

continuation-in-part of Ser. No. US 1990-580431, filed

on 7 Sep 1990, now abandoned which is a

continuation-in-part of Ser. No. US 1989-425504, filed

on 20 Oct 1989, now abandoned which is a

continuation-in-part of Ser. No. US 1989-368672, filed

on 20 Jun 1989, now abandoned which is a

continuation-in-part of Ser. No. US 1989-329018, filed on 24 Mar 1989, now abandoned, said Ser. No. US 181271

which is a continuation-in-part of Ser. No. US 1993-45957, filed on 12 Apr 1993, now abandoned

DOCUMENT TYPE:

Utility Granted

FILE SEGMENT:
PRIMARY EXAMINER:
LEGAL REPRESENTATIVE:

Campell, Bruce R. Meigs, J. Timothy

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

17 1

NUMBER OF DRAWINGS:

40 Drawing Figure(s); 40 Drawing Page(s)

LINE COUNT:

TI

AB

10800

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 13 OF 20 USPATFULL on STN

Method of inducing gene transcription in a plant

The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences

of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired. A novel signal peptide sequence and corresponding DNA coding sequence is also provided. Further provided are assays for the identification and isolation of additional chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1998:91843 USPATFULL

TITLE: Method of inducing gene transcription in a plant

INVENTOR(S): Ryals, John A., Durham, NC, United States

Friedrich, Leslie B., Cary, NC, United States

Uknes, Scott J., Apex, NC, United States

Ward, Eric R., Basel, Switzerland

PATENT ASSIGNEE(S): Novartis Finance Corporation, New York, NY, United

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.:

US 5789214 19980804 US 1995-455244 19950531 (8)

RELATED APPLN. INFO.:

Continuation-in-part of Ser. No. US 1993-42847, filed on 6 Apr 1993, now abandoned Ser. No. Ser. No. US 1992-848506, filed on 6 Mar 1992, now abandoned And Ser. No. US 1993-45957, filed on 12 Apr 1993, now abandoned 76 Ser. No. US 1994-181271, filed on 13 Jan 1994, now patented, Pat. No. US 5614395 which is a continuation-in-part of Ser. No. US 1993-93301, filed on 16 Jul 1993, now abandoned which is a continuation of Ser. No. US 1992-973197, filed on 6 Nov 1992, now abandoned which is a continuation of Ser. No. US 1991-678378, filed on 1 Apr 1991, now abandoned which is a continuation of Ser. No. US 1989-305566, filed on 6 Feb 1989, now abandoned which is a continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned, said Ser. No. US 42847 which is a continuation of Ser. No. US 1990-632441,

continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned, said Ser. No. US 42847 which is a continuation of Ser. No. US 1990-632441, filed on 21 Dec 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned And Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned, said Ser. No. US 848506 which is a continuation-in-part of Ser. No. US 1991-768122, filed on 27 Sep 1991, now abandoned which is a continuation-in-part of Ser. No. US 1990-580431, filed on 7 Sep 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-368672, filed on 20 Jun 1989, now abandoned which is a

continuation-in-part of Ser. No. US 1989-329018, filed

on 24 Mar 1989, now abandoned

DOCUMENT TYPE:

FILE SEGMENT:

Granted

PRIMARY EXAMINER:

LEGAL REPRESENTATIVE:

Meigs, J. Timothy

NUMBER OF CLAIMS: 14 EXEMPLARY CLAIM: 1,8

NUMBER OF DRAWINGS: 40 Drawing Figure(s); 40 Drawing Page(s)

LINE COUNT: 10972

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 14 OF 20 USPATFULL on STN

Chemically regulatable and anti-pathogenic DNA sequences and uses

thereof

TI

AB

The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired. A novel signal peptide sequence and corresponding DNA coding sequence is also provided. Further provided are assays for the identification and isolation of additional chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1998:79424 USPATFULL

TITLE: Chemically regulatable and anti-pathogenic DNA

sequences and uses thereof

INVENTOR(S): Ryals, John A., Durham, NC, United States

Alexander, Danny C., Cary, NC, United States Goodman, Robert M., Madison, WI, United States Stinson, Jeffrey R., Davie, FL, United States

Novartis Finance Corporation, New York, NY, United

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION:
APPLICATION INFO.:
RELATED APPLN. INFO.:

PATENT ASSIGNEE(S):

US 5777200 19980707 US 1995-455416 19950531 (8)

Division of Ser. No. US 1994-181271, filed on 13 Jan 1994, now patented, Pat. No. US 5614395 And a continuation-in-part of Ser. No. US 1993-42847, filed on 6 Apr 1993, now abandoned Ser. No. Ser. No. US 1992-848506, filed on 6 Mar 1992, now abandoned And Ser. No. US 1993-45957, filed on 12 Apr 1993, now abandoned , said Ser. No. US -181271 which is a continuation-in-part of Ser. No. US 1993-93301, filed on 16 Jul 1993, now abandoned which is a continuation of Ser. No. US 1992-973197, filed on 6 Nov 1992, now abandoned which is a continuation of Ser. No. US 1991-678378, filed on 1 Apr 1991, now abandoned which is a continuation of Ser. No. US 1989-305566, filed on 6 Feb 1989, now abandoned which is a continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said Ser. No. US -42847 which is a continuation of Ser. No. US 1990-632441, filed on 21 Dec 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned And Ser. No. US -165667 , said Ser. No. US -848506 which is a continuation-in-part of Ser. No. US 1991-768122, filed on 27 Sep 1991, now abandoned which is a continuation-in-part of Ser. No. US 1990-580431, filed

on 7 Sep 1990 which is a continuation-in-part of Ser. No. US -425504 which is a continuation-in-part of Ser. No. US 1989-368672, filed on 20 Jun 1989 which is a continuation-in-part of Ser. No. US 1989-329018,

filed on 24 Mar 1989

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Campbell, Eggerton A. LEGAL REPRESENTATIVE: Meigs, J. Timothy

NUMBER OF CLAIMS: 10 EXEMPLARY CLAIM: 1

AB.

NUMBER OF DRAWINGS: 40 Drawing Figure(s); 40 Drawing Page(s)

LINE COUNT: 9630

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 15 OF 20 USPATFULL on STN

TI DNA sequences encoding SAR8.2 proteins and uses thereof

The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired. A novel signal peptide sequence and corresponding DNA coding sequence is also provided Further provided are assays for the identification and isolation of additional chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1998:69272 USPATFULL

TITLE: DNA sequences encoding SAR8.2 proteins and uses thereof

INVENTOR(S):

Ryals, John A., Durham, NC, United States

Alexander, Danny C., Cary, NC, United States

Goodman, Robert M., Madison, WI, United States

Stinson, Jeffrey R., Davie, FL, United States

PATENT ASSIGNEE(S): Novartis Finance Corporation, New York, NY, United

States (U.S. corporation)

APPLICATION INFO.: RELATED APPLN. INFO.: US 5767369 19980616 US 1995-456265 19950531 (8)

Division of Ser. No. US 1994-181271, filed on 13 Jan 1994, now patented, Pat. No. US 5614395 And a continuation-in-part of Ser. No. US 1993-42847, filed on 6 Apr 1993, now abandoned Ser. No. Ser. No. US 1992-848506, filed on 6 Mar 1992, now abandoned And Ser. No. US 1993-45957, filed on 12 Apr 1993, now abandoned, said Ser. No. US -181271 which is a continuation-in-part of Ser. No. US 1993-93301, filed on 16 Jul 1993, now abandoned which is a continuation of Ser. No. US 1992-973197, filed on 6 Nov 1992, now abandoned which is a continuation of Ser. No. US 1991-678378, filed on 1 Apr 1991, now abandoned which is a continuation of Ser. No. US

6 Feb 1989, now abandoned which is a

continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said Ser. No. US -42847 which is a continuation of Ser. No. US 1990-632441, filed on 21 Dec 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned And Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said Ser. No. US -848506 which is a continuation-in-part of Ser. No. US 1991-768122, filed on 27 Sep 1991, now abandoned which is a continuation-in-part of Ser. No. US 1990-580431, filed on 7 Sep 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-368672, filed on 20 Jun 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-329018, filed on 24 Mar 1989, now abandoned

DOCUMENT TYPE:

Utility

FILE SEGMENT:

Granted

PRIMARY EXAMINER:

LEGAL REPRESENTATIVE:

Fox, David T. Meigs, J. Timothy

NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

16 1,4

NUMBER OF DRAWINGS:

40 Drawing Figure(s); 40 Drawing Page(s)

LINE COUNT:

TI

AB

9667

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 16 OF 20 USPATFULL on STN L5

Chemically inducible promoter of a plant PR-1 gene

The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired. A novel signal peptide sequence and corresponding DNA coding sequence is also provided. Further provided are assays for the identification and isolation of additional chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

97:107324 USPATFULL

TITLE:

Chemically inducible promoter of a plant PR-1 gene

INVENTOR (S):

Ryals, John A., Durham, NC, United States Friedrich, Leslie B., Cary, NC, United States

Uknes, Scott J., Apex, NC, United States

Ward, Eric R., Basel, Switzerland

PATENT ASSIGNEE(S):

Novartis Corporation, Summit, NJ, United States (U.S.

corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5689044		19971118	
APPLICATION INFO.:	US 1995-449043		19950524	(8)

RELATED APPLN. INFO.:

Division of Ser. No. US 1994-181271, filed on 13 Jan 1994, now patented, Pat. No. US 5614395 which is a

continuation-in-part of Ser. No. US 1993-93301, filed on 16 Jul 1993, now abandoned which is a continuation of Ser. No. US 1992-973197, filed on 6 Nov 1992, now abandoned which is a continuation of Ser. No. US 1991-678378, filed on 1 Apr 1991, now abandoned which is a continuation of Ser. No. US 1989-305566, filed on 6 Feb 1989, now abandoned which is a continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said Ser. No. US 1995-449043, filed on 24 May 1995 which is a continuation-in-part of Ser. No. US 1993-42847, filed on 6 Apr 1993, now abandoned which is a continuation of Ser. No. US 1990-632441, filed on 21 Dec 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned And a continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said Ser. No. US 1995-449043, filed on 24 May 1995 which is a continuation-in-part of Ser. No. US 1992-848506, filed on 6 Mar 1992, now abandoned which is a continuation-in-part of Ser. No. US 1991-768122, filed on 27 Sep 1991, now abandoned which is a continuation-in-part of Ser. No. US 1990-568431, filed on 7 Sep 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-368672, filed on 20 Jun 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-329018, filed on 24 Mar 1989, now abandoned , said Ser. No. US 1995-449043, filed on 24 May 1995 which is a continuation-in-part of Ser. No. US 1993-45957, filed on 12 Apr 1993, now abandoned

DOCUMENT TYPE:

Utility

FILE SEGMENT:

TI

AB

Granted

PRIMARY EXAMINER: LEGAL REPRESENTATIVE: Fox, David T.

NUMBER OF CLAIMS:

Meigs, J. Timothy

7 1,3

EXEMPLARY CLAIM: NUMBER OF DRAWINGS:

40 Drawing Figure(s); 40 Drawing Page(s)

LINE COUNT:

9180 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 17 OF 20 USPATFULL on STN L5

Chemically inducible promoter of a cucumber chitinase/lysozyme gene The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired. A novel signal peptide sequence and corresponding DNA coding sequence is also provided. Further provided are assays for the identification and isolation of additional chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 97:68579 USPATFULL

TITLE: Chemically inducible promoter of a cucumber

chitinase/lysozyme gene

INVENTOR(S): Ryals, John A., Cary, NC, United States

Beck, James J., Apex, NC, United States

Friedrich, Leslie B., Cary, NC, United States

PATENT ASSIGNEE(S): Novartis Finance Corporation, New York, NY, United

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.:

US 5654414 19970805 US 1995-444803 19950519 (8)

RELATED APPLN. INFO.:

Division of Ser. No. US 1994-181271, filed on 13 Jan 1994, now patented, Pat. No. US 5614395 which is a

continuation-in-part of Ser. No. US 1993-93301, filed on 16 Jul 1993, now abandoned which is a continuation of Ser. No. US 1992-973197, filed on 6 Nov 1992, now

abandoned which is a continuation of Ser. No. US 1991-678378, filed on 1 Apr 1991, now abandoned which is a continuation of Ser. No. US 1989-305566, filed on

6 Feb 1989, now abandoned which is a

continuation-in-part of Ser. No. US 1988-165667, filed

on 8 Mar 1988, now abandoned, said Ser. No. US

1995-444803, filed on 19 May 1995 which is a continuation-in-part of Ser. No. US 1993-42847, filed on 6 Apr 1993, now abandoned which is a continuation of

Ser. No. US 1990-632441, filed on 21 Dec 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned And a continuation-in-part of Ser. No. US 1988-165667,

filed on 8 Mar 1988, now abandoned, said Ser. No. US 1995-444803, filed on 19 May 1995 which is a

continuation-in-part of Ser. No. US 1992-848506, filed

on 6 Mar 1992, now abandoned which is a

continuation-in-part of Ser. No. US 1991-768122, filed

on 27 Sep 1991, now abandoned which is a

continuation-in-part of Ser. No. US 1990-580431, filed

on 7 Sep 1990, now abandoned which is a

continuation-in-part of Ser. No. US 1989-425504, filed

on 20 Oct 1989, now abandoned which is a

continuation-in-part of Ser. No. US 1989-368672, filed

on 20 Jun 1989, now abandoned which is a

continuation-in-part of Ser. No. US 1989-329018, filed

on 24 Mar 1989, now abandoned , said Ser. No. US 1995-444803, filed on 19 May 1995 which is a

continuation-in-part of Ser. No. US 1993-45957, filed

on 12 Apr 1993, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Fox, David T.

LEGAL REPRESENTATIVE: Meigs, J. Timothy NUMBER OF CLAIMS: 14

EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 40 Drawing Figure(s); 40 Drawing Page(s)

LINE COUNT: 9681

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 18 OF 20 USPATFULL on STN

TI Chemically regulatable and anti-pathogenic DNA sequences and uses thereof

The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences

of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired. A novel signal peptide sequence and corresponding DNA coding sequence is also provided. Further provided are assays for the identification and isolation of additional chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

97:64102 USPATFULL

TITLE:

Chemically regulatable and anti-pathogenic DNA

sequences and uses thereof

INVENTOR(S):

Ryals, John A., Durham, NC, United States Alexander, Danny C., Cary, NC, United States Beck, James J., Cary, NC, United States Duesing, John H., Riehen, Switzerland

Goodman, Robert M., Madison, WI, United States Friedrich, Leslie B., Cary, NC, United States Harms, Christian, Bad Krozingen, Germany, Federal

Republic of

Meins, Jr., Frederich, Reihen, Switzerland Montoya, deceased, Alice, late of Lake Stevens, WA, United States by Terry Montoya, legal representative Moyer, Mary B., Cary, NC, United States Neuhaus, Jean-Marc, Basel, Switzerland

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PATENT ASSIGNEE(S):

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.: RELATED APPLN. INFO.: US 5650505 19970722 US 1995-449315 19950524 (8)

Division of Ser. No. US 1994-181271, filed on 13 Jan 1994, now patented, Pat. No. US 5614395 And a continuation-in-part of Ser. No. US 1993-42847, filed on 6 Apr 1993, now abandoned Ser. No. Ser. No. US 1992-848506, filed on 6 Mar 1992, now abandoned And Ser. No. US 1993-45957, filed on 12 Apr 1993, now abandoned , said Ser. No. US -181271 which is a continuation-in-part of Ser. No. US 1993-93301, filed on 16 Jul 1993, now abandoned which is a continuation of Ser. No. US 1992-973197, filed on 6 Nov 1992, now abandoned which is a continuation of Ser. No. US 1991-678378, filed on 1 Apr 1991, now abandoned which is a continuation of Ser. No. US 1989-305566, filed on 6 Feb 1989, now abandoned which is a continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said Ser. No. US -42847 which is a continuation of Ser. No. US 1990-632441, filed on 21 Dec 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned And Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned , said

Ser. No. US -848506 which is a continuation-in-part of Ser. No. US 1991-768122, filed on 27 Sep 1991, now abandoned which is a continuation-in-part of Ser. No. US 1990-580431, filed on 7 Sep 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-368672, filed on 20 Jun 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-329018, filed on 24 Mar 1989, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Moody, Patricia R. LEGAL REPRESENTATIVE: Meigs, J. Timothy

NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1

AB

NUMBER OF DRAWINGS: 40 Drawing Figure(s); 40 Drawing Page(s)

LINE COUNT: 9648

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 19 OF 20 USPATFULL on STN

TI Chemically regulatable and anti-pathogenic DNA sequences and uses thereof

The present invention provides chemically regulatable DNA sequences capable of regulating transcription of an associated DNA sequence in plants or plant tissues, chimeric constructions containing such sequences, vectors containing such sequences and chimeric constructions, and transgenic plants and plant tissues containing these chimeric constructions. In one aspect, the chemically regulatable DNA sequences of the invention are derived from the 5' region of genes encoding pathogenisis-related (PR) proteins. The present invention also provides anti-pathogenic sequences derived from novel cDNAs coding for PR proteins which can be genetically engineered and transformed into plants to confer enhanced resistance to disease. Also provided is a method for the exogenous regulation of gene expression in plants, which comprises obtaining a plant incapable of regulating at least one gene or gene family, or; at least one heterologous gene, due to the deactivation of at least one endogenous signal transduction cascade which regulates the gene in the plant, and applying a chemical regulator to the plant at a time when expression of the gene is desired. A novel signal peptide sequence and corresponding DNA coding sequence is also provided. Further provided are assays for the identification and isolation of additional chemically regulatable DNA sequences and cDNAs encoding PR proteins and assays for identifying chemicals capable of exogenously regulating the chemically regulatable DNA sequences of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 97:24912 USPATFULL

TITLE: Chemically regulatable and anti-pathogenic DNA

sequences and uses thereof

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PATENT ASSIGNEE(S): Ciba-Geigy Corporation, Tarrytown, NY, United States

(U.S. corporation)

APPLICATION INFO.: RELATED APPLN. INFO.:

US 5614395 19970325 US 1994-181271 19940113 (8)

Continuation-in-part of Ser. No. US 1993-93301, filed on 16 Jul 1993, now abandoned Ser. No. Ser. No. US 1993-42847, filed on 6 Apr 1993, now abandoned Ser. No. Ser. No. US 1993-45957, filed on 12 Apr 1993, now abandoned And Ser. No. US 1992-848506, filed on 6 Mar 1992, now abandoned which is a continuation-in-part of Ser. No. US 1991-768122, filed on 27 Sep 1991, now abandoned which is a continuation-in-part of Ser. No. US 1990-580431, filed on 7 Sep 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-368672, filed on 20 Jun 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-329018, filed on 24 Mar 1989, now abandoned , said Ser. No. US -93301 which is a continuation of Ser. No. US 1992-973197, filed on 6 Nov 1992, now abandoned which is a continuation of Ser. No. US 1991-678378, filed on 1 Apr 1991, now abandoned which is a continuation of Ser. No. US 1989-305566, filed on 6 Feb 1989, now abandoned which is a continuation-in-part of Ser. No. US 1988-165667, filed on 8 Mar 1988, now abandoned, said Ser. No. US -42847 which is a continuation of Ser. No. US 1990-632441, filed on 21 Dec 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-425504, filed on 20 Oct 1989, now abandoned And Ser. No. US 1988-165667, filed on 8 Mar 1988, now

abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Moody, Patricia R.

LEGAL REPRESENTATIVE: Meigs, J. Timothy, Walsh, Andrea C.

NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 40 Drawing Figure(s); 40 Drawing Page(s)

LINE COUNT: 9793

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 20 OF 20 USPATFULL on STN

TI Processes for producing polyhydroxybutyrate and related polyhydroxyalkanoates in the plastids of higher plants

The present invention relates to a process for producing poly-D-(-)-3-hydroxybutyric acid (PHB) and related polyhydroxyalkanoates (PHA) in the plastids of plants. The production of PHB is accomplished by genetically transforming plants with modified genes from microorganisms. The genes encode the enzymes required to synthesize PHB from acetyl-CoA or related metabolites and are fused with additional plant sequences for targeting the enzymes to the plastid.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 97:20412 USPATFULL

TITLE: Processes for producing polyhydroxybutyrate and related

polyhydroxyalkanoates in the plastids of higher plants
Somerville Christopher R Portola Valley CA United

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NUMBER KIND DATE

19970311 US 5610041 PATENT INFORMATION:

US 1994-254357 19940606 (8) APPLICATION INFO.:

20120607 DISCLAIMER DATE:

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1993-108193, filed

on 17 Aug 1993, now abandoned which is a

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on 19 Jul 1991, now abandoned

Utility DOCUMENT TYPE: Granted FILE SEGMENT:

Rories, Charles C. P. PRIMARY EXAMINER:

LEGAL REPRESENTATIVE: McLeod, Ian C.

NUMBER OF CLAIMS: 36 36 EXEMPLARY CLAIM:

37 Drawing Figure(s); 20 Drawing Page(s) NUMBER OF DRAWINGS:

LINE COUNT: 2233

CAS INDEXING IS AVAILABLE FOR THIS PATENT.